C-A OPERATIONS PROCEDURES MANUAL

4.120.102.d NASA Science Research Foundation (NSRL)
(Peer 27) Sweep Tests

Attachment

C-A-OPM Procedures in which this Attachment is used.		
4.120.102		

Hand Processed Changes

HPC No.	Date	Page Nos.	Initials
_____	_____	_____	_____
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Approved:_____*Signature on File*_____   _____
Collider-Accelerator Department Chairman   Date

V. Castillo

PASS ANNUAL ACCEPTANCE TEST PROTOCOL

Division A Software Filename and Checksum: Title:_____   **Checksum: _____**

Division B Software Filename and Checksum: Title:_____   **Checksum: _____**

Initial testing complete:

Test Team Leader's Name (Print): _____   **Life Number: _____**

Test Team Leader's Name (Sign): _____   **Date: _____/_____/_____**

Acceptance test procedure complete (following repairs and retesting if required):

Test Team Leader's Name (Print): _____   **Life Number:_____**

Test Team Leader's Name (Sign): _____   **Date: _____/_____/_____**

Test results reviewed by:

Safety Section Head's Name (Print):_____   **Life Number: _____**

Safety Section Head's Name (Sign):_____   **Date: _____/_____/_____**

Test results accepted by Radiation Safety Committee:

RSC Member's Name (Print):_____   **Life Number: _____**

 RSC Member's Name (Sign):_____   **Date: _____/_____/_____**

1.1   To Sweep   Zone NSRL-Z1

CLOSE	Gates **BGE1, BGI1**		
☐ **VERIFY**	Gates **BGE1** ☐, **BGI1** ☐	**CLOSED**	
PLACE	**Peer 27** in **Controlled Access (CA), Mode 16**		
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 16**	
ACTIVATE	Check station **1CS1**		
☐ **VERIFY**	Check station **1CS1** indicator **(Area Secured)**	**BLINKS ONCE**	
ACTIVATE	Check station **1CS2**		
☐ **VERIFY**	Check station **1CS2** indicator **(Area Secured)**	**BLINKS ONCE**	
ACTIVATE	Check station **1CS3**		
☐ **VERIFY**	Check station **1CS3** indicator **(Area Secured)**	**BLINKS ONCE**	
EXIT	Gate **BGE1** with **Simultaneous Release (SR)**		
☐ **VERIFY**	MCR sees Zone **NSRL-Z1**	**SWEPT**	
PLACE	**Peer 27** in **CA, Mode 17**		
☐ **VERIFY**	Peer 27 **remains** in **CA**	**MODE 16**	
☐ **VERIFY**	MCR sees Zone **NSRL-Z1**	**SWEPT**	
PLACE	**Peer 27** in **CA, Mode 18**		
☐ **VERIFY**	Peer 27 **remains** in **CA**	**MODE 16**	
☐ **VERIFY**	MCR sees Zone **NSRL-Z1**	**SWEPT**	
PLACE	**Peer 27** in **Restricted Access (RA), Mode 8**		
☐ **VERIFY**	**Peer 27** is in **RA**	**MODE 8**	
☐ **VERIFY**	MCR sees Zone **NSRL-Z1**	**SWEPT**	
PLACE	**Peer 27** in **RA, Mode 9**		
☐ **VERIFY**	Peer 27 **remains** in **RA**	**MODE 8**	
☐ **VERIFY**	MCR sees Zone **NSRL-Z1**	**SWEPT**	
PLACE	**Peer 27** in **RA, Mode 10**		
☐ **VERIFY**	Peer 27 **remains** in **RA**	**MODE 8**	
☐ **VERIFY**	MCR sees Zone **NSRL-Z1**	**SWEPT**	
PLACE	**Peer 27** in **Safe Access (SA), Mode 2**		
☐ **VERIFY**	**Peer 27** is in **SA**	**MODE 2**	
☐ **VERIFY**	MCR sees Zone **NSRL-Z1**	**SWEPT**	

☐   **Check for acceptance of To Sweep Zone NSRL-Z1**

1.2   Test SR entry holds Sweep and Illegal exit drops Sweep of Zone NSRL-Z1

PLACE	**Peer 27** in **CA, Mode 16**		
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 16**	
ENTER	**BGE1** with **#20 Key** and **SR** from **MCR**		
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 16**	
☐ **VERIFY**	**MCR** sees Zone **NSRL-Z1**	**SWEPT**	
OPEN	Gate **BGE1 without** Simultaneous Release and **Exit**		
☐ **VERIFY**	MCR sees Zone **NSRL-Z1**	**NOT SWEPT**	
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 16**	
CLOSE	Gate **BGE1**		

☐   **Check for acceptance of Test SR entry holds Sweep and Illegal exit drops Sweep of Zone NSRL-Z1**

1.3   Test Attempt to Sweep Zone NSRL-Z1 with Gate open fail

	CLOSE	Gates **BGE1, BGI1**	
☐	**VERIFY**	Gates **BGE1 ☐, BGI1 ☐**	**CLOSED**
	PLACE	**Peer 27** in **CA, Mode 16**	
☐	**VERIFY**	**Peer 27** is in **CA**	**MODE 16**
	OPEN	Gate **BGE1** and **Hold open**	
	ACTIVATE	Check station **1CS1**	
☐	**VERIFY**	Check station **1CS1** does	**NOT BLINK**
	CLOSE	Gate **BGE1**	
	ACTIVATE	Check station **1CS1**	
☐	**VERIFY**	Check station **1CS1** indicator **(Area Secured)**	**BLINKS ONCE**
☐	**Check for acceptance of Test Attempt to Sweep Zone NSRL-Z1 with Gate open fail**		

1**.4**   **To Sweep   Zone NSRL-Z2**

	CLOSE	Gates **BGE2, BGI1, BGI2**	
☐	**VERIFY**	Gates **BGE2 ☐, BGI1 ☐, BGI2 ☐**	**CLOSED**
	PLACE	**Peer 27** in **Controlled Access (CA), Mode 16**	
☐	**VERIFY**	**Peer 27** is in **CA**	**MODE 16**
	ACTIVATE	Check station **2CS1**	
☐	**VERIFY**	Check station **2CS1** indicator **(Area Secured)**	**BLINKS ONCE**
	ACTIVATE	Check station **2CS2**	
☐	**VERIFY**	Check station **2CS2** indicator **(Area Secured)**	**BLINKS ONCE**
	ACTIVATE	Check station **2CS3**	
☐	**VERIFY**	Check station **2CS3** indicator **(Area Secured)**	**BLINKS ONCE**
	EXIT	Gate **BGE2** with **Simultaneous Release (SR)**	
☐	**VERIFY**	MCR sees Zone **NSRL-Z2**	**SWEPT**
	PLACE	**Peer 27** in **CA, Mode 17**	
☐	**VERIFY**	Peer 27 **remains** in **CA**	**MODE 16**
☐	**VERIFY**	MCR sees Zone **NSRL-Z2**	**SWEPT**
	PLACE	**Peer 27** in **CA, Mode 18**	
☐	**VERIFY**	Peer 27 **remains** in **CA**	**MODE 16**
☐	**VERIFY**	MCR sees Zone **NSRL-Z2**	**SWEPT**
	PLACE	**Peer 27** in **Restricted Access (RA), Mode 8**	
☐	**VERIFY**	**Peer 27** is in **RA**	**MODE 8**
☐	**VERIFY**	MCR sees Zone **NSRL-Z2**	**SWEPT**
	PLACE	**Peer 27** in **RA, Mode 9**	
☐	**VERIFY**	Peer 27 **remains** in **RA**	**MODE 8**
☐	**VERIFY**	MCR sees Zone **NSRL-Z2**	**SWEPT**
	PLACE	**Peer 27** in **RA, Mode 10**	
☐	**VERIFY**	Peer 27 **remains** in **RA**	**MODE 8**
☐	**VERIFY**	MCR sees Zone **NSRL-Z2**	**SWEPT**
	PLACE	**Peer 27** in **Safe Access (SA), Mode 2**	
☐	**VERIFY**	**Peer 27** is in **SA**	**MODE 2**
☐	**VERIFY**	MCR sees Zone **NSRL-Z2**	**SWEPT**
☐	**Check for acceptance of To Sweep Zone NSRL-Z2**		

1.5   Test SR entry holds Sweep and Illegal exit drops Sweep of Zone NSRL-Z2

	PLACE	**Peer 27** in **CA, Mode 16**	
▢	**VERIFY**	**Peer 27** is in **CA**	**MODE 16**

	ENTER	**BGE2** with **#20 Key** and **SR** from **MCR**	
▢	**VERIFY**	**Peer 27** is in **CA**	**MODE 16**
▢	**VERIFY**	**MCR** sees Zone **NSRL-Z2**	**SWEPT**

	OPEN	Gate **BGE2 without** Simultaneous Release and **Exit**	
▢	**VERIFY**	MCR sees Zone **NSRL-Z2**	**NOT SWEPT**
▢	**VERIFY**	**Peer 27** is in **CA**	**MODE 16**
	CLOSE	Gate **BGE2**	

▢   **Check for acceptance of Test SR entry holds Sweep and Illegal exit drops Sweep of Zone NSRL-Z2**

1.6   Test Attempt to Sweep Zone NSRL-Z2 with Gate open fail

	CLOSE	Gates **BGE2, BGI1, BGI2**	
▢	**VERIFY**	Gates **BGE2** ▢, **BGI1** ▢, **BGI2** ▢	**CLOSED**

	PLACE	**Peer 27** in **CA, Mode 16**	
▢	**VERIFY**	**Peer 27** is in **CA**	**MODE 16**

	OPEN	Gate **BGE2** and **Hold open**	

	ACTIVATE	Check station **2CS1**	
▢	**VERIFY**	Check station **2CS1** does	**NOT BLINK**

	CLOSE	Gate **BGE2**	
	ACTIVATE	Check station **2CS1**	
▢	**VERIFY**	Check station **2CS1** indicator **(Area Secured)**	**BLINKS ONCE**

▢   **Check for acceptance of Test Attempt to Sweep Zone NSRL-Z2 with Gate open fail**

1.7   To Sweep   Zone NSRL-Z3

CLOSE	Gate **BGI2**	
☐ **VERIFY**	Gate **BGI2** ☐	**CLOSED**
PLACE	**Peer 27** in **Controlled Access (CA), Mode 16**	
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 16**
ACTIVATE	Check station **3CS1**	
☐ **VERIFY**	Check station **3CS1** indicator **(Area Secured)**	**BLINKS ONCE**
ACTIVATE	Check station **3CS2**	
☐ **VERIFY**	Check station **3CS2** indicator **(Area Secured)**	**BLINKS ONCE**
EXIT	Gate **BGI2** with **Simultaneous Release (SR)**	
☐ **VERIFY**	MCR sees Zone **NSRL-Z3**	**SWEPT**
PLACE	**Peer 27** in **CA, Mode 17**	
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 17**
☐ **VERIFY**	MCR sees Zone **NSRL-Z3**	**SWEPT**
PLACE	**Peer 27** in **CA, Mode 18**	
☐ **VERIFY**	Peer 27 **remains** in **CA**	**MODE 17**
☐ **VERIFY**	MCR sees Zone **NSRL-Z3**	**SWEPT**
PLACE	**Peer 27** in **Restricted Access (RA), Mode 8**	
☐ **VERIFY**	**Peer 27** is in **RA**	**MODE 8**
☐ **VERIFY**	MCR sees Zone **NSRL-Z3**	**SWEPT**
PLACE	**Peer 27** in **RA, Mode 9**	
☐ **VERIFY**	**Peer 27** is in **RA**	**MODE 9**
☐ **VERIFY**	MCR sees Zone **NSRL-Z3**	**SWEPT**
PLACE	**Peer 27** in **RA, Mode 10**	
☐ **VERIFY**	Peer 27 **remains** in **RA**	**MODE 9**
☐ **VERIFY**	MCR sees Zone **NSRL-Z3**	**SWEPT**
PLACE	**Peer 27** in **Safe Access (SA), Mode 2**	
☐ **VERIFY**	**Peer 27** is in **SA**	**MODE 2**
☐ **VERIFY**	MCR sees Zone **NSRL-Z3**	**SWEPT**

☐   **Check for acceptance of To Sweep Zone NSRL-Z3**

1.8   Test SR entry of BGI2 holds Sweep and Illegal exit drops Sweep of Zone NSRL-Z3

PLACE	**Peer 27** in **CA, Mode 16**	
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 16**
ENTER	**BGI2** with **#20 Key** and **SR** from **MCR**	
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 16**
☐ **VERIFY**	**MCR** sees Zone **NSRL-Z3**	**SWEPT**
OPEN	Gate **BGI2 without** Simultaneous Release and **Exit**	
☐ **VERIFY**	MCR sees Zone **NSRL-Z3**	**NOT SWEPT**
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 16**
CLOSE	Gate **BGI2**	

☐   **Check for acceptance of Test SR entry holds Sweep and Illegal exit drops Sweep of Zone NSRL-Z3**

1.9   Test Attempt to Sweep Zone NSRL-Z3 with Gate open fail

	CLOSE	Gates **BGE1, BGI1**	
☐	**VERIFY**	Gates **BGE1** ☐**, BGI1** ☐	**CLOSED**
	PLACE	**Peer 27** in **CA, Mode 16**	
☐	**VERIFY**	**Peer 27** is in **CA**	**MODE 16**
	OPEN	Gate **BGE1** and **Hold open**	
	ACTIVATE	Check station **3CS1**	
☐	**VERIFY**	Check station **3CS1** does	**NOT BLINK**
	CLOSE	Gate **BGE1**	
	ACTIVATE	Check station **3CS1**	
☐	**VERIFY**	Check station **3CS1** indicator **(Area Secured)**	**BLINKS ONCE**

☐   **Check for acceptance of Test Attempt to Sweep Zone NSRL-Z3 with Gate open fail**

1.10   Mode 18, Mode 10, Zone NSRL-Z2 and Zone NSRL-Z3

	STATION	**One** personnel in **Zone NSRL-Z2**	
	PLACE	**Peer 27** in **CA, Mode 16**	
☐	**VERIFY**	**Peer 27** is in **CA**	**MODE 16**
	FORCE	**Sweep** of Zone **NSRL-Z2** and Zone **NSRL-Z3**	
☐	**VERIFY**	**MCR** sees Zone **NSRL-Z2** ☐ and Zone **NSRL-Z3** ☐	**SWEPT**
	PLACE	**Peer 27** in **CA, Mode 18**	
☐	**VERIFY**	**Peer 27** is in **CA**	**MODE 18**
	OPEN	Gate **BGI1**	
☐	**VERIFY**	**MCR** sees Zone **NSRL-Z2**	**NOT SWEPT**
☐	**VERIFY**	**MCR** sees Zone **NSRL-Z3**	**SWEPT**
☐	**VERIFY**	**Peer 27** goes to **Safe Access**	**MODE 2**
	CLOSE	Gate **BGI1**	
	PLACE	**Peer 27** in **CA, Mode 16**	
☐	**VERIFY**	**Peer 27** is in **CA**	**MODE 16**
	FORCE	**Sweep** of Zone **NSRL-Z2**	
☐	**VERIFY**	**MCR** sees Zone **NSRL-Z2** ☐ and Zone **NSRL-Z3** ☐	**SWEPT**
	PLACE	**Peer 27** in **CA, Mode 10**	
☐	**VERIFY**	**Peer 27** is in **CA**	**MODE 10**
	OPEN	Gate **BGI1**	
☐	**VERIFY**	**MCR** sees Zone **NSRL-Z2**	**NOT SWEPT**
☐	**VERIFY**	**MCR** sees Zone **NSRL-Z3**	**SWEPT**
☐	**VERIFY**	**Peer 27** goes to **Safe Access**	**MODE 2**
	CLOSE	Gate **BGI1**	
	PLACE	**Peer 27** in **CA, Mode 16**	
☐	**VERIFY**	**Peer 27** is in **CA**	**MODE 16**

FORCE	**Sweep** of Zone **NSRL-Z2** and Zone **NSRL-Z3**	
☐ **VERIFY**	**MCR** sees Zone **NSRL-Z2** ☐ and Zone **NSRL-Z3** ☐	**SWEPT**
PLACE	**Peer 27** in **CA, Mode 18**	
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 18**
OPEN	Gate **BGE2**	
☐ **VERIFY**	**MCR** sees Zone **NSRL-Z2**	**NOT SWEPT**
☐ **VERIFY**	**MCR** sees Zone **NSRL-Z3**	**SWEPT**
☐ **VERIFY**	**Peer 27** goes to **Safe Access**	**MODE 2**
CLOSE	Gate **BGE2**	**CLOSE**
STATION	**One Personnel** in Zone **NSRL-Z3**	
PLACE	**Peer 27** in **CA, Mode 16**	
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 16**
FORCE	**Sweep** of Zone **NSRL-Z2**	
☐ **VERIFY**	**MCR** sees Zone **NSRL-Z2** ☐ and Zone **NSRL-Z3** ☐	**SWEPT**
PLACE	**Peer 27** in **CA, Mode 18**	
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 18**
OPEN	Gate **BGI2**	
☐ **VERIFY**	**MCR** sees Zone **NSRL-Z2**	**NOT SWEPT**
☐ **VERIFY**	**MCR** sees Zone **NSRL-Z3**	**NOT SWEPT**
☐ **VERIFY**	**Peer 27** goes to **Safe Access**	**MODE 2**
CLOSE	Gate **BGI2**	
PLACE	**Peer 27** in **CA, Mode 16**	
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 16**

☐ **Check for acceptance of Test: Mode 18, Mode 10, Zone NSRL-Z2 and Zone NSRL-Z3**

1.11   Mode 17, Mode 9, and Zone NSRL-Z3

STATION	**One** personnel in **Zone NSRL-Z3**	
PLACE	**Peer 27** in **CA, Mode 16**	
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 16**
FORCE	**Sweep** of Zone **NSRL-Z3**	
☐ **VERIFY**	**MCR** sees Zone **NSRL-Z3**	**SWEPT**
PLACE	**Peer 27** in **CA, Mode 17**	
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 17**
OPEN	Gate **BGI2**	
☐ **VERIFY**	**MCR** sees Zone **NSRL-Z3**	**NOT SWEPT**
☐ **VERIFY**	**Peer 27** goes to **Safe Access**	**MODE 2**
CLOSE	Gate **BGI2**	
PLACE	**Peer 27** in **CA, Mode 16**	
☐ **VERIFY**	**Peer 27** is in **CA**	**MODE 16**
FORCE	**Sweep** of Zone **NSRL-Z3**	
☐ **VERIFY**	**MCR** sees Zone **NSRL-Z3**	**SWEPT**

	PLACE	**Peer 27** in **CA, Mode 9**	
☐	**VERIFY**	**Peer 27** is in **CA**	**MODE 9**
	OPEN	Gate **BGI2**	
☐	**VERIFY**	**MCR** sees Zone **NSRL-Z3**	**NOT SWEPT**
☐	**VERIFY**	**Peer 27** goes to **Safe Access**	**MODE 2**
	CLOSE	Gate **BGI2**	
	PLACE	**Peer 27** in **CA, Mode 16**	
☐	**VERIFY**	**Peer 27** is in **CA**	**MODE 16**
	FORCE	**Sweep** of Zone **NSRL-Z3**	
☐	**VERIFY**	**MCR** sees Zone **NSRL-Z3**	**SWEPT**
	PLACE	**Peer 27** in **CA, Mode 17**	
☐	**VERIFY**	**Peer 27** is in **CA**	**MODE 17**
	OPEN	Gate **BGE2**	
☐	**VERIFY**	**MCR** sees Zone **NSRL-Z3**	**SWEPT**
☐	**VERIFY**	Peer 27 **remains** in **CA**	**MODE 17**
	CLOSE	Gate **BGE2**	
	PLACE	**Peer 27** in **CA, Mode 16**	
☐	**VERIFY**	**Peer 27** is in **CA**	**MODE 16**

☐   **Check for acceptance of Test: Mode 17, Mode 9, Zone NSRL-Z3**

END OF TEST PROCEDURE

TTL: Sign for completion of initial testing: _____

        Date: _____/_____/_____

TTL: Sign for completion of final testing: _____

        Date: _____/_____/_____